

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-3 (canceled).

Claim 4 (currently amended): A process for producing a synthetic quartz powder which comprises hydrolyzing an alkoxysilane to obtain a silica gel having an average particle diameter of from 10 to 500 μm and bringing said silica gel into contact with at least one of helium and hydrogen gas at a temperature of from 400°C to 1,300°C, wherein before or after said bringing said silica gel into contact with at least one of helium and hydrogen gas, said silica gel is heat-treated at a temperature of 1,000°C or higher for from 10 to 50 hours in an oxygen-containing atmosphere, and

wherein said synthetic quartz powder, upon heating from room temperature to 1,700°C, generates gases in which the amount of CO is 300 nl/g or smaller and the amount of CO₂ is 30 nl/g or smaller.

Claims 5-7 (canceled).

Claim 8 (previously presented): The process of Claim 4, wherein said synthetic quartz powder has a bulk density of from 1.3 to 1.7 g/cm³ and a metal impurity content of 500 ppb or lower.

Claim 9 (previously presented): The process of Claim 4, wherein said synthetic quartz powder has a metal impurity content of 200 ppb or lower.

Claim 10 (previously presented): The process of Claim 4, wherein said synthetic quartz powder has a metal impurity content of 100 ppb or lower.

Claim 11 (previously presented): The process of Claim 4, wherein said silica gel is brought into contact with at least one of helium and hydrogen gas at a temperature of from 600°C to 1,300°C.

Claim 12 (previously presented): The process of Claim 4, wherein said silica gel is brought into contact with at least one of helium and hydrogen gas at a temperature of from 800°C to 1,300°C.

Claim 13 (previously presented): The process of Claim 4, wherein said silica gel has an average particle diameter of from 100 to 500 μm .

Claim 14 (previously presented): The process of Claim 4, wherein said silica gel is brought into contact with a mixture of helium and hydrogen gas.

Claim 15 (currently amended): The process of Claim 14, wherein said mixture of helium and hydrogen gas comprises ~~at least~~ up to 4% hydrogen.

Claim 16 (currently amended): A process for producing a synthetic quartz powder which comprises hydrolyzing an alkoxysilane to obtain a silica gel having an average particle diameter of from 10 to 500 μm and bringing said silica gel into contact with at least one of helium and hydrogen gas at a temperature of from 400°C to 1,300°C, wherein before or after said bringing said silica gel into contact with at least one of helium and hydrogen gas, said silica gel is heat-treated at a temperature of 1,000°C or higher for from 10 to 50 hours in an oxygen-containing atmosphere. ~~The process of Claim 4,~~ wherein said silica gel is brought into contact with pure helium.

Claim 17 (previously presented): The process of Claim 4, wherein said silica gel is heat-treated at a temperature of 1,200°C or higher for from 10 to 50 hours in an oxygen-containing atmosphere.

Claim 18 (previously presented): The process of Claim 4, wherein said silica gel is heat-treated at a temperature of 1,000°C or higher for from 20 to 40 hours in an oxygen-containing atmosphere.

Claim 19 (previously presented): The process of Claim 4, wherein said silica gel is heat-treated at a temperature of 1,000°C or higher for from 25 to 35 hours in an oxygen-containing atmosphere.

Claim 20 (previously presented): The process of Claim 4, wherein said silica gel is heat-treated at a temperature of 1,000°C or higher for from 10 to 50 hours in an oxygen-containing atmosphere at a heating rate of 50 to 200°C per hour.

Claim 21 (previously presented): The process of Claim 4, wherein said silica gel is heat-treated at a temperature of 1,000°C or higher for from 10 to 50 hours in an oxygen-containing atmosphere at a heating rate of 70 to 150°C per hour.

Claim 22 (new): The process of Claim 16, wherein said synthetic quartz powder has a bulk density of from 1.3 to 1.7 g/cm³ and a metal impurity content of 500 ppb or lower.

Claim 23 (new): The process of Claim 16, wherein said synthetic quartz powder has a metal impurity content of 200 ppb or lower.

Claim 24 (new): The process of Claim 16, wherein said synthetic quartz powder has a metal impurity content of 100 ppb or lower.

Claim 25 (new): The process of Claim 16, wherein said silica gel has an average particle diameter of from 100 to 500 μm.